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ABSTRACT

This document provides the teacher education faculty with a list of tasks and procedures for adapting and completing a set of 10 standardized figures which should accurately depict the knowledge base of their institution's teacher education program, including its component programs (i.e., general education, professional education, and each specialty program) and courses of instruction. These 10 figures provide a uniform system for defining, documenting, and explaining the knowledge base for a nested, systems management, composite model. An explanation of each of the three models embodied in the composite model is provided. Appendixes include a set of 10 figures to be adapted and completed by the teacher education faculty, including examples of completed figures and the definition of terms and bibliographies associated with them, and 3 procedures checklists designed specifically to assist faculty in adapting and defining the 3 figures which document the knowledge base of each component program within the teacher education program. (Author/JD)

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A Knowledge Base Framework: Procedures and Products[1]

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Running Head: Knowledge Base Framework

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ABSTRACT

This document provides the Teacher Education faculty with a list of tasks and set of procedures for adapting and completing a set of 10 standardized figures which should accurately depict the knowledge base of their institution's: (1) Teacher Education Program, (2) component programs (i.e., General Education, Professional Education, and each specialty program), and (3) courses of instruction. These ten figures provide a uniform system for defining, documenting, and explaining the knowledge base for a nested, systems management, Composite Model. An explanation for each of three models embodied in the Composite Model is provided. An appendices section contains (a) a set of ten figures to be adapted and completed by the Teacher Education faculty, including examples of completed figures and the definition of terms and bibliographies associated with them, and (b) three Procedures Checklists designed specifically to assist faculty in adapting and defining the three figures which document the knowledge base of each component program within the Teacher Education Program.

A Knowledge Base Framework: Procedures and Products

This document provides the Teacher Education faculty with a list of tasks and set of procedures for adapting and completing a set of 10 standardized figures which should accurately depict the knowledge base of their institution's: (1) Teacher Education Program, (2) component programs (i.e., General Education, Professional Education, and each specialty program), and (3) courses of instruction. These ten figures provide a uniform system for defining, documenting, and explaining the knowledge base for a nested, systems management, Composite Model (e.g., Elmore, 1978); hence, in preparing the Institutional Report for NCATE, faculty can collectively and systematically (1) respond to Standards IA and IB, the knowledge base standards, and (2) fully explain each component program within their Teacher Education Program.

The Composite Model

The Composite Model described in this report (see Figure 11, p.31), embodies three separate models which synthesize the knowledge base of an institution's Teacher Education Program at three different levels:

1. The Program level, or the knowledge base for deriving and evaluating the institution's Teacher Education Program (i.e., Figure 1, Appendix A)

2. The Component Program level, or the knowledge base for defining the objectives, central concepts of instruction, and courses of instruction for each Component Program within the institution's Teacher Education Program: the General Education Program, the Professional Education Program, and each of the Specialty Study Programs (i.e., Figure 2, Appendix B)

3. The Course of Instruction level, or the knowledge base for the delivery of instruction, the evaluation of students, and the feedback process. (i.e., Figure 3, Appendix A).

The three figures developed to depict this Composite Model (i.e., Figures 1, 2, and 3), as well as the tasks and procedures for compiling the information and adapting them, are by no means meant to be definitive. To the contrary, they should be considered only as a starting point; a means for faculty to begin to reason, deliberate, and puzzle about the organization of and rationale for their Teacher Education Program. It is expected that as they do this, the ideas and concepts generated by their concerted efforts will be reflected in both the reconfiguration of and definitions of terms associated with each figure, as well as in the tasks to be carried out and procedures to be followed. It is also expected that, even upon completion, these figures will be further refined on a regular basis to depict (1) both the differences within and commonalities among each of the component programs, and (2) the changes that have occurred over the course of time.

Organizing for Results

Although it is critical that the entire Teacher Education faculty provide input and assist in compiling the necessary information and documentation that explains the knowledge base of the institution's Teacher

Education Program, it is equally critical that one individual be given the responsibility of providing the leadership and making sure this is done in an accurate and appropriate manner. Hence, the individual who assumes the position of the Knowledge Base Chair is ultimately responsible for: (1) developing the framework that organizes, synthesizes, and summarizes the knowledge base information for the Teacher Education Program into a concise, standard format for the NCATE Report and (2) organizing, educating, and supervising the Teacher Education faculty in such a manner that this task is successfully accomplished. The information compiled in this document is designed to assist both the Knowledge Base Chair and Teacher Education faculty in carrying out these mandates. The following sections present the tasks to be completed, procedures to be followed, and resulting products needed by the Teacher Education faculty to fully explain and document the knowledge base of their Teacher Education Program for the Institutional Report to NCATE.

Teacher Education Faculty Tasks

The tasks to be carried out by the Teacher Education Faculty are classified into two groups: (1) those tasks requiring input and feedback from the entire Teacher Education faculty, and (2) those tasks involving input and feedback only from faculty teaching within a specific component program (i.e., General Education, Professional Education, and each of the specialty programs). Ideally, this would mean that faculty members should only have to research and develop the rationale and documentation for one component program. In all probability, however, they will have to assist in doing this for more than one program. For example, a faculty member who teaches courses in the Elementary Education, Early Childhood, and Professional Education Programs may be working with all three faculty groups to compile the documentation for each of the these programs.

Tasks Involving all Teacher Education Faculty

1. Adapt and complete Figure 1, the Teacher Education Program Model; the knowledge base model for deriving and defining the institution's Teacher Education Program.

2. Write definitions for each of the terms associated with Figure 1, cite references, and include a bibliography.

3. Adapt and complete Figure 3, the Course of Instruction Model; the knowledge base model for the delivery of instruction and evaluation feedback for all courses within the Teacher Education Program.

4. Write the definitions for each of the terms associated with Figure 3, cite references, and include a bibliography.

5. Complete Figures 7 through 10, the matrices associated with documenting compliance to criteria 19, 20, 21, and 23 in Standard IB.

Tasks Involving Component Program Faculty

1. List, in taxonomical order, the exact title and number of each course required to complete the Component Program. Be sure the course titles and numbers match those listed in the institution's catalog.

2. Identify the knowledge base model of the Component Program and complete Figure 2, the Curriculum Matrix.

3. Write definitions for each of the terms associated with Figure 2 and cite references; a bibliography should accompany each definition to identify and document the knowledge base of the Component Program.

4. Review and edit the Component Program objectives to reflect the knowledge base model(s) for the Component Program.

5. Complete Figure 5, the Component Program "Objectives-Course of Instruction Matrix."

6. Complete Figure 6, the Content-Behavior-Course of Instruction Matrix for the Component Program.

7. Update the syllabus for each course of instruction to reflect the knowledge base model for the Component Program.

8. Write a 3-4 page description of the Component Program following the format provided by NCATE.

The materials needed to assist the Teacher Education faculty carry out these tasks are contained in the appendices. Appendix A contains Figures 1 and 3 (i.e., the Teacher Education Program Model and the Course of Instruction Model), as well as a completed example of each, including the definition of terms and bibliography associated with the two models. Appendix B contains: (1) Figures 2, 5, and 6 as well as completed examples of each figure for an Elementary Education Program, including examples of the definitions and bibliography associated with the Curriculum Matrix (i.e, Figure 2), and (2) the Procedures Checklists for adapting and completing Figures 2, 5, and 6. Appendix C contains examples of Figures 4, 7, 8, 9, and 10, as well

as examples of their accompanying documentation. It is advised that, before being distributed to the faculty, Figures 1, 2, 5, and 6 be enlarged to a legal size. This makes placement of the contents easier for faculty to maneuver and facilitates typing the final copies. Once these figures are in a final draft form, they can be either redrawn with a computer software program or shrunk back down to standard size for Institutional Reports.

Procedures

An initial task for the Knowledge Base Chair is to schedule and conduct the Knowledge Base Workshops. These workshops are held for the purposes of: (1) discussing the major tasks to be carried out by the Teacher Education Faculty, (2) acquainting the faculty with the specific procedures involved in adapting Figures 1 through 10, and (3) obtaining faculty input and suggestions, providing feedback, setting target dates and deadlines, and disseminating other relevant information relating to the NCATE report.

Depending on faculty schedules and size, a minimum of two of these workshops should be held and include all

Teacher Education faculty members. As noted in "Teacher Education Faculty Tasks", the tasks involved in completing Figures 1, 3, and 7 through 10 include obtaining input from all Teacher Education faculty. However, the tasks involved in completing Figures 2, 5, and 6 require the particular collaboration of those faculty teaching within a specific component program. Therefore, after an initial orientation session, the tasks discussed and information disseminated at the workshops should be divided accordingly. That is, one or more workshops should be scheduled to disseminate the information and procedures for completing Figures 1, 3, and 7 through 10; and one or more workshops should be scheduled to disseminate the information and procedures for completing Figures 2, 5, and 6.

Compiling the information to document each of the Component Program Models (i.e., Figures 2, 5, and 6) is the most difficult and time consuming of all tasks. It requires that the faculty have, or acquire, extensive knowledge concerning (1) the content, philosophies, and methods of their Program(s), (2) how the content, philosophies, and methods of the courses they teach fit within the structure of their Component Program(s), as well as the Teacher Education Program, and (3) the

research that provides the rationale for the content, philosophies, and methods of their Program(s). Although the three Procedures Checklists, provided in Appendix B are helpful in completing these figures, it also requires that the faculty spend some time researching and discussing these issues with cohorts and administrators.

Another initial task for the Knowledge Base Chair is to establish a "chain-of-command" for developing and securing the knowledge base documentation for each of the component programs. To do this, the Chair should carefully select a "key" faculty member from each Component Program. These key faculty members are the "team leaders" and given the responsibility of directing and collaborating with the other faculty members in their specific Program. The purpose of the team's collaboration is to: (1) develop the information needed to adapt, complete, and define Figures 2, 5, and 6, the Component Program Model documentation, (2) write the 3 to 4 page description of the Component Program following the format provided by NCATE, and (3) provide other required Program documentation that may be requested by the Chair. The key faculty members are also responsible for collecting, compiling, and editing all of their

Program materials and returning them, in a final draft form, to the Knowledge Base Chair.

In many small institutions there may be no choice in the selection of this key faculty member since there may be only one full-time individual teaching the courses in a particular Program; or perhaps even the only full-time faculty member teaching the courses in several Programs. In either case, the Knowledge Base Chair will probably have to provide additional assistance to any key faculty member without a team.

A third task for the Knowledge Base Chair is to create two sets of individual file folders for each Component Program and clearly label each folder with the following information: (1) the title of the Component Program and (2) the name of the key faculty member responsible for securing the Component Program documentation. One set of Component Program Folders will be distributed to the key faculty members and the Knowledge Base Chair will keep the second set. In this way, as Component Program information is forwarded to the Chair, it can be placed in the appropriate Program folder and the key faculty members can keep the duplicate copies in their Program folders.

The following materials should be placed in each Component Program Folder and given to the respective key faculty member:

1. a copy of Figures 1 and 3 and a copy of the completed example of each of these figures, including the definition of terms and bibliography associated with the figures (i.e., the materials contained in Appendix A).
2. a copy of Figures 2, 5, and 6 and a copy of the completed example of each of these figures, including the definition of terms and bibliography associated with Figure 2 and the Procedures Checklist for completing each figure (i.e., the materials contained in Appendix B).
3. a copy of the completed examples of Figures 4 and 7 through 10 (i.e., the materials contained in Appendix C).
4. a copy of the suggested NCATE format for writing the 3 to 4 page Program description for Volume II.

Other kinds of information that might be helpful to both the faculty and the Knowledge Base Chair in documenting Component Program knowledge bases and compiling the NCATE Report could be included as well.

For example, a list of the key faculty members, their campus extension numbers, and the Component Program for which each is responsible; a brief description of the responsibilities of the key faculty members; the purpose of the team collaboration efforts; and examples of course syllabi could also be included.

The Component Program Folders containing the afore mentioned materials should be distributed to the respective key faculty members at a knowledge base orientation workshop where the tasks and procedures for obtaining the documentation are carefully reviewed and explained. Copies of this same set of materials should be packaged in large mailing envelopes and distributed to the other education faculty members at the same or additional orientation workshops.

As these tasks are completed by the Program faculty, and the required materials are returned to the Knowledge Base Chair, the Chair reviews each set of materials to confirm that: (1) all of the requested information is complete, (2) Figures 2, 5, and 6 have been appropriately filled out, and (3) the key faculty member has initialed his/her approval of the contents. This is an iterative process and usually requires additional communications and/or meetings with key

faculty members. This is particularly true in regard to the Curriculum Matrix (i.e., Figure 2). As previously discussed, completing this matrix requires that faculty have (or acquire) extensive knowledge of both the organization and content of their Program, as well as utilize their research and analytical skills.

Completing Figures 4 and 7 through 10 requires the least amount of effort by the faculty. The information compiled in Figure 2 is used by the Chair to develop Figure 4. This figure summarizes the knowledge base models, purposes, and measured outcomes for the specialty programs within the institution's Teacher Education Program (See Figure 4, Appendix C). Completing Figures 7 through 10 simply requires that these matrices, containing the criteria for compliance and courses of instruction within the institution's Professional Education component, be passed around among the Professional Education faculty to have them mark the appropriate cells. After they have done this, a final adeptation of Figures 7 through 10 should then be developed and passed around among the faculty to have them initial their approval of the contents. Once again, this is an iterative process and may require several "go arounds" among the faculty before a final agreement is

reached. Examples of documentation for Figures 7 through 10 are provided in Appendix C.

When all ten figures have been adapted, and the definition of terms and references associated with Figures 1, 2, and 3 have been developed, a complete draft of the knowledge base standards and Volume II of the NCATE Report can be compiled. Figure 1, Figure 2 for the Professional Education Education Component, Figure 3, and Figures 7 through 10 should be placed in Volume I and used to explain the institution's knowledge base model and document the criterion for compliance to standards in Standard IA and Standard IB. The remaining Component Program Models (i.e., Figure 2) and their accompanying figures (i.e., Figures 5 and 6) should be placed in Volume II, along with the 3 to 4 page Program description required by NCATE, to explain and document Program organization, content, and methods.

Products

Completing the tasks and procedures listed in the previous sections should result in the following products for inclusion in the Institutional Report for NCATE.

1. Figure 1: A knowledge base model for a Teacher Education Program, including:
   a. definitions of the 4 components of the model, and
   b. definitions of specific knowledge bases within each of the 4 components.

2. Figure 2: a knowledge base model for each Component Program within the Teacher Education Program; this curriculum matrix includes the following information:
   a. the title of the Component Program Model,
   b. the title and number of each course of instruction within the Component Program,
   c. the central concepts of instruction within the Component Program Model, and
   d. the courses of instruction designed to address each of the central concepts of instruction in the model.

3. Figure 5: A "Content-Behavior-Course of Instruction Matrix" for each Component Program. This matrix depicts the following information in a concise and straitforward format: (1) the central concepts

of instruction included in each Component Program Model, (2) the courses of instruction designed to address each of the central concepts of instruction within the model, and (3) the required student behaviors that measure the extent to which the central concepts of instruction have been learned.

4. Figure 6: A "Program Objectives-Course of Instruction Matrix" for each Component Program. This matrix compiles and depicts the courses of instruction designed to address specific program objectives.

5. A definition of the terms associated with each of the central concepts of instruction within each of the Component Program Models (i.e., Figure 2), including the respective references and bibliographies.

6. Figure 3: A knowledge base model for the delivery of instruction and evaluation feedback.

7. A definition of the terms associated with each of the three models within the Composite Model (i.e., Figures 1, 2, and 3), including the respective references and bibliographies.

8. Figures 7 through 10: Matrices for showing compliance to criteria 19, 20, 21, and 23 in Standard IB.

9. Figure 4: A figure compiled by the Knowledge Base Chair that contains:
   a. the name of each specialty program,
   b. the name of the model for each specialty program,
   c. the purpose of each specialty program, and
   d. the measured outcome of each specialty program.

Explaining the Composite Model

As mentioned earlier, the Composite Model embodies three separate models which synthesize the knowledge base of an institution's Teacher Education Program at three different levels: the Program level, the Component Program Level, and the Course of Instruction Level. This

section provides a more detailed description of the Composite Model. First, each of the three models which comprise the Composite Model (i.e, Figures 1, 2, and 3) are defined and explained. Then the process of uniting the three models to form the Composite model is illustrated and discussed.

Figure 1: The Teacher Education Program Model

The Teacher Education Program Model (Figure 1, Appendix A) is a methodological model for deriving and evaluating objectives for an institution's Teacher Education Program. Adapting and completing this model requires that the entire Teacher Education faculty: (1) review the example model and definitions presented in Appendix A, and (2) provide input to the Knowledge Base Chair as to how to adapt this model to accurately depict the knowledge base of their institution's Teacher Education Program. The Teacher Education Program Model is composed of four separate components: (a) Professional Information, (b) the Tyler Rationale, (c) Evaluation Information, and (d) the Teacher Education Program. The operational (i.e., Professional Information and Evaluation Information) and conceptional components (i.e., the Tyler Rationale), provide the

impetus for deriving the outcome component, the Teacher Education Program. These four components are described as follows:

1. Professional Information - This operational component embodies such dynamic knowledge bases as professional and state standards boards, minimum competency standards, public school organization, policies, and practices, professional education organizations, learned societies, and relevant research findings in each component program's respective area of education. These knowledge bases provide a mechanism for the institution's Teacher Education Program to be kept on the cutting edge of educational knowledge and evaluated in terms of the quality, effectiveness, and efficiency expected of the professional teacher. The results are quality education programs that should continually improve over time. Example definitions of the knowledge bases that constitute the Professional Information component may be found in Appendix A.

2. The Tyler Rationale - This rationale (Tyler, 1949), which has served as the basis for most of the major efforts in educational evaluation over the past 50 years, is the conceptual component of the Teacher Education Program Model and the mechanism for deriving the goals, objectives, knowledge base model, and component programs for the institution's Teacher Education Program. The Tyler Rationale requires that all content considered for inclusion in the Program be weighed against three sources: the needs of the student, the needs of society, and the logic of the subject matter or subject matter specialists. If the content meets these criteria, then tentative goals are formulated and the faculty decide whether these goals are compatible with the institution's stated philosophy of education, mission, and purpose, as well as whether or not they conform to conditions intrinsic to learning. If so, then the tentative goals are stated in written form as the Teacher Education Program goals; these stated Program goals define and provide a rationale for the Teacher Education Program's objectives, component programs, and knowledge base models.

The Tyler rationale also serves as the conceptual model for Program evaluation. According to the Tyler model, the process of evaluation begins with stated objectives; evaluations are consequently carried out to determine the extent to which the stated objectives have been met. Hence, the model serves for planning both learning experiences and evaluation procedures.

3. Evaluation Information - This operational component includes both internal and external evaluation information collected at each of three levels: the course of instruction level, the Component Program level, and the Teacher Education Program level. The evaluation data collected at each of these levels are synthesized by the Teacher Education faculty and relevant administration to determine whether goals and objectives are being met and/or whether modifications are required. Examples of knowledge bases which might constitute internal evaluations are (a) evaluations by students of the courses of instruction, (b) self-evaluations by instructors of their courses of instruction, and

(c) annual performance evaluations of instructors by Division/Department Chairs. Examples of knowledge bases which constitute external evaluations are: (a) entry-year experience evaluations by school personnel, (b) descriptive statistics from state curriculum exams, (c) graduate follow-up evaluations by school personnel, (d) evaluations of student teachers by public school personnel, and (e) evaluation and accreditation data from accreditation organizations. Examples of definitions of these knowledge bases are presented in Appendix A.

4. Teacher Education Program - In a systems management model, the Teacher Education Program is defined by its goals, objectives, component programs, and knowledge base model(s). The objectives and knowledge base model for the Teacher Education Program drive the objectives and models for each of the component programs. Thus, all Teacher Education component programs have the common elements of a knowledge base model and program objectives.

To summarize the Teacher Education Program Model, data gathered from the Professional Information and Evaluation Information components provide the impetus for the Tyler Rationale. The Tyler Rationale provides the mechanism for synthesizing the Professional and Evaluation data to derive the Teacher Education Program goals. These broad goals drive and define the Teacher Education Program objectives, model(s), and component programs,as well as strongly influence the objectives and models for each of the component programs. Documentation for the knowledge base of an institution's Teacher Education Program can be found in institutional self-study reports, accreditation reports, Program follow-up studies, certification standards reports, certification exam objectives, teacher education and certification handbooks,and the institution's catalog.

Figure 2: The Component Program Model

The Component Program Model (Figure 2, Appendix B) describes and documents the basic educational concepts, values, and skills embodied in the knowledge base model(s) and objectives of a specific Component Program within the institution's Teacher Education Program.

Hence, the content of a Component Program is driven and defined by the Component Program model and objectives.

It should be noted that, although each Component Program has its own model(s) and set of objectives, there should also be some models common to many of the Component Programs and some objectives common to all Component Programs. For example, models common to many of the Component Programs might be Effective Teaching or Classroom Manager; objectives common to all Component Programs might be mastery learning, minimum competency and/or teacher licensing and certification. These common Program models and objectives unite the Component Programs and document the continuity and integration of the Teacher Education Program.

The Component Program model and objectives dictate the central concepts of instruction that must be incorporated into the Program in order for students to master the Program objectives. These central concepts of instruction are the "glue" that bonds the individual courses of instruction into a coherent, integrated program. Courses of instruction are developed to impart these central concepts of instruction to students. Hence, these courses of instruction provide the vehicle for students to learn the concepts and master program

objectives. Documentation of a program's central concepts of instruction can be found in course syllabi, textbooks and other instructional materials, class record books, and examinations and other assignments given to students to fulfill course requirements.

Included in Appendix B is a completed example of Figure 2 for an Elementary Education Program. Once Figure 2 has been adapted and completed, it is important that the terms associated with the figure (i.e.,the name of the model and the central concepts of instruction) be defined and references cited. In this way, the figure is operationalized and there will be less confusion both in explaining the model to the NCATE team and in their interpretation of the model. Including a short bibliography with each definition is also critical; this documents the model's knowledge base. That is, it cites the areas of research, scholarship, and wisdom of practice from which Program faculty impart knowledge, formulate judgements, teach skills, and make professional decisions. Examples of the definition of terms associated with an Elementary Education Program and their respective bibliographies are also included in Appendix B.

Figure 3: The Course of Instruction Model

The Course of Instruction Model (Figure 3, Appendix A) is a simplified, three-stage model of instruction/assessment (e.g., Olila, 1989) for each course of instruction within an institution's Teacher Education Program. In the first stage, Defined Objectives, the instructor states what the learner is expected to learn and accomplish in the form of instructional objectives. In the second stage, Defined Instructional Resources and Implementation, the instructor defines the instructional strategies, tasks to be carried out, and resources to be used. The third stage, Defined Evaluation, requires that the instructor select from a variety of evaluation techniques in order to determine the extent to which the students have met the instructional objectives. All three stages of this model, instructional objectives, resources and implementation strategies, and evaluation techniques, should be documented in the syllabus for each course of instruction. Also included in the course syllabus should be a bibliography; this documents the instructor's knowledge base for the course of instruction.

Feedback during any of these three stages may result in modification of the delivery/evaluation

process. That is, the instructor considers student evaluation data, self-evaluation data, and the department/division chair's evaluation data in making decisions as to whether to make any revisions or modifications to the course of instruction.

Figures 1, 2, and 3: The Composite Model

Figure 3 also represents the essential element of evaluation feedback. As illustrated by Figure 11, this process unites Figure 3 with Figure 1 to complete the nested, systems management Composite Model.

Insert Figure 11 abut here

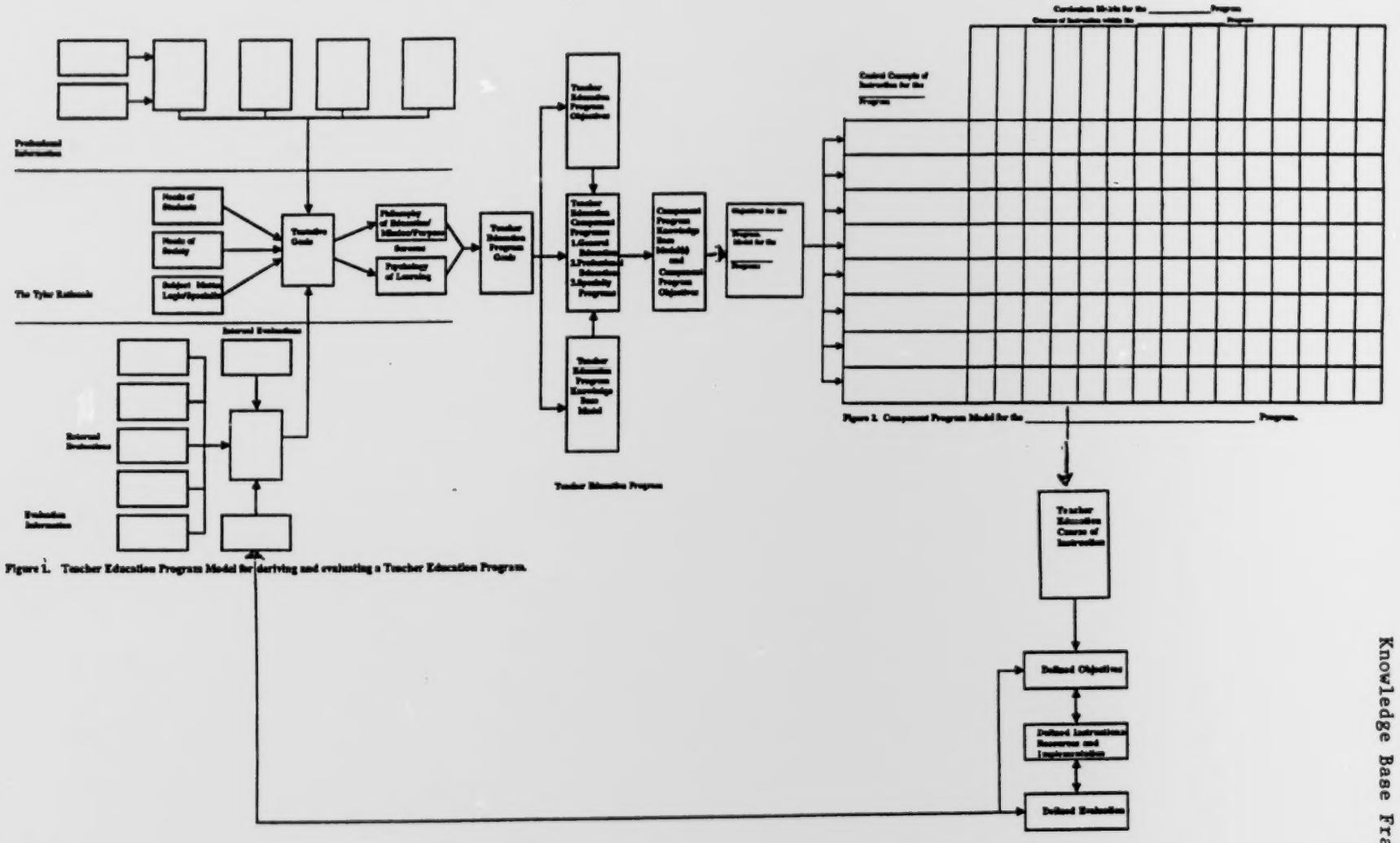

Figure 1. Teacher Education Program Model for deriving and evaluating a Teacher Education Program.

Figure 2. Component Program Model for the _____ Program.

Figure 3. Course of Instruction Model for a Teacher Education Program's courses of instruction.

Figure 11. Composite Model for a Teacher Education Program.

Each instructor analyzes the evaluation data mentioned previously and synthesizes it in his/her Annual Report. This information is then fed back into Figure 1 through the Evaluation Component (e.g., Instructor Evaluations, Institutional Self-Studies).

Once this cycle is completed, the process of deriving and/or evaluating the goals and objectives of the institution's Teacher Education Program begins again. Evaluation data are analyzed and compiled in institutional self-study reports, then synthesized and integrated according to the Tyler Rationale process to assess the Teacher Education Program goals, objectives, and model. As a result of the feedback acquired from both the Evaluation Information and Professional Information components, the Teacher Education Program goals, objectives, or model may be reconfigured, deleted, left as is, or replaced by innovative ones. Any change in the Teacher Education Program goals, objectives, or model, affects Component Program objectives/content, model, and possibly even the type and number of Component Programs; any changes in Component Program objectives or models should then be reflected in the type and/or content of the courses of instruction.

Summary

This document provides Teacher Education Faculty with an operational framework to organize and document the knowledge base for their institution's Teacher Education Program. It is by no means assumed to be the definitive process. It was written with only a single objective in mind: to provide a starting point for faculty to begin to deliberate about the rationale for the content of their programs and courses and, thus, collectively and systematically respond to Standards IA and IB of the NCATE Report. However, after completing the process, a second "hidden" objective emerges and it is from this "hidden" objective that the faculty is expected to profit the most. That is, by going through the process of completing the figures contained in this document, they will gain new insights and knowledge, not only in the areas of their Program's content, but also in other skills associated with compiling this information; this includes providing a logical rationale for the scope and sequence of what they teach, understanding how what they teach affects the Teacher Education Program, and being able to explain this rationale and concept to others. This intense analytical and synthesis process profoundly illustrates,

to everyone involved, that teaching is no longer a matter of instructors stepping into the classroom, closing the door, and preceeding to teach whatever they feel like teaching. Today, a variety of audiences hold Teacher Education faculty accountable for teaching students the skills that are necessary to become competant teachers in our nation's classrooms. Hence, faculty must not only be familiar with the knowledge in their field and able to provide a rationale for what they teach, but also to understand how what they teach in their courses fits into "the big picture" of the Teacher Education Program. That is, how the content of the courses they teach affects other courses and programs within the Teacher Education Program and, in particular, the final product of the Program, the entry-year teacher. It is anticipated that the procedures and products contained in this document will be helpful in meeting both of the objectives.

References

Elmore, R. (1978). Organizational models of social program implementation. In D. Mann (Ed.), Making Change Happen? New York: Teachers College Press.

Olila, P. (1989). Supervision in today's schools (3rd ed.). White Plains, NY: Logan.

Tyler, R. (1949). Basic principles of curriculum and instruction. Chicago: University of Chicago Press.

APPENDIX A

Figure 1 - The Teacher Education Program Model

Figure 3 - The Course of Instruction Model

Example of Definition of terms
and bibliography associated with
Figures 1 and 2

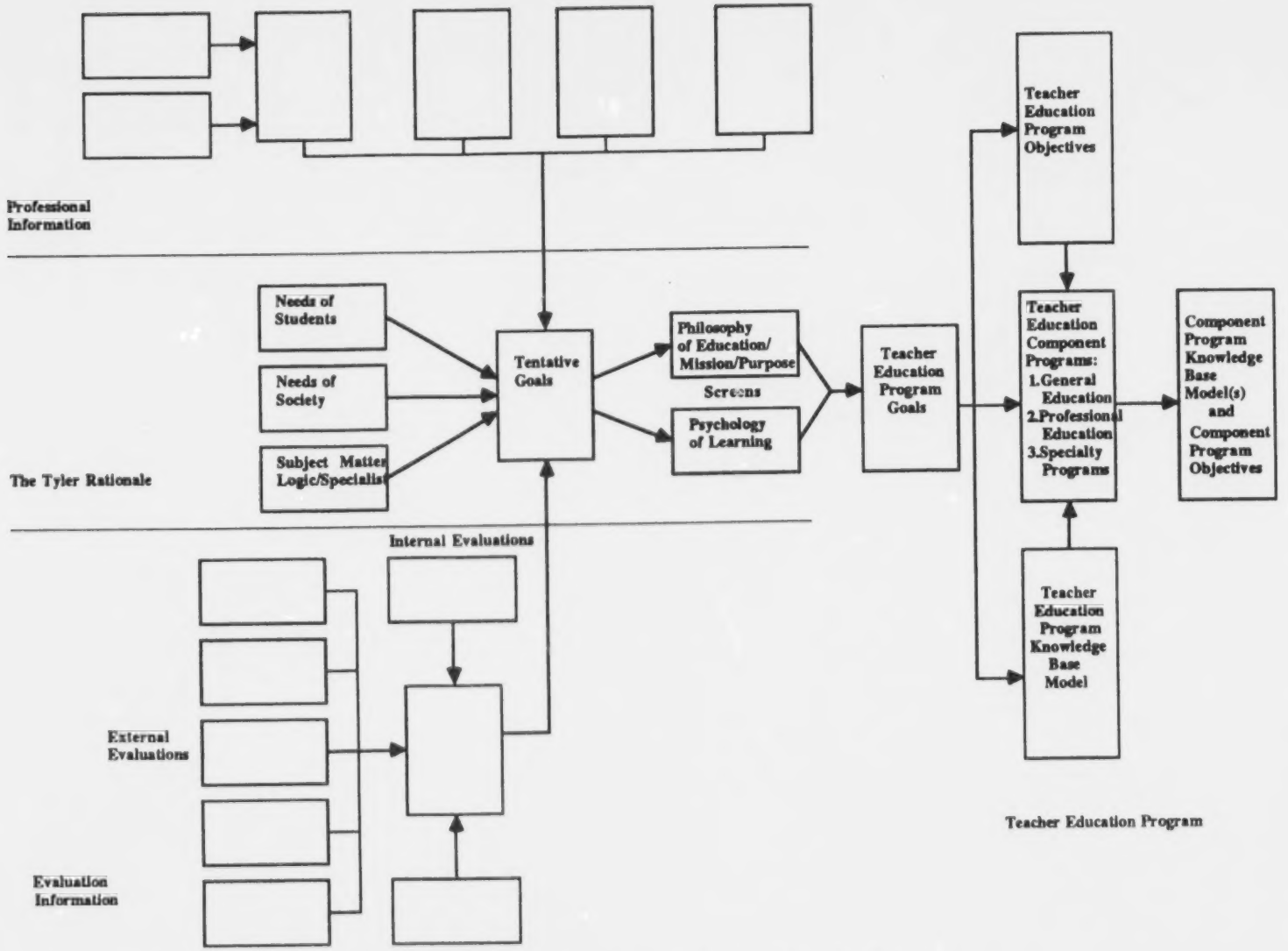

Figure 1. Teacher Education Program Model for deriving and evaluating a Teacher Education Program.

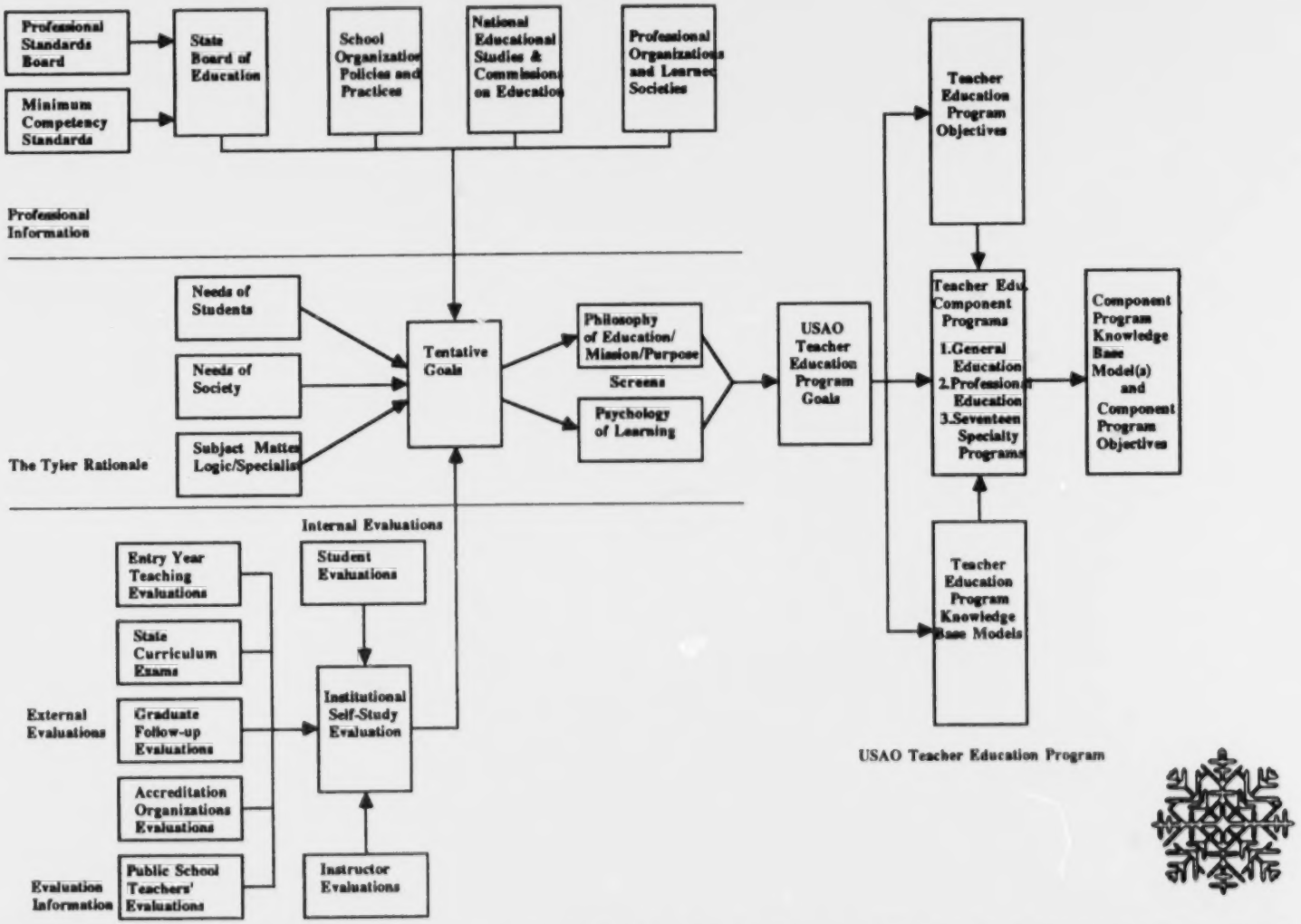

Figure 1.1 Methodological Model for deriving and evaluating the Teacher Education Program at the University of Science and Arts of Oklahoma.

Definition of Knowledge Bases Included in the Professional Information Component of the USAO Teacher Education Knowledge Base Model

1. Oklahoma State Board of Education:

   The governing body for the preparation of teachers in the state of Oklahoma. The State Board of Education governs through a process known as the "approved program approach to teacher education and certification." This refers to the fact that each teacher-preparation institution of higher education in Oklahoma must have its teacher education programs accredited by the State Board of Education.

2. School Organization, Policy and Practices :

   The routine and standard practices of schools in regard to their organizational, operational, and instructional policies and practices at various levels of functioning, including, but not restricted to:

   A. standard organizational concepts such as scheduling and planning at the district level for the school year, at the school level for classes, and at the class level for teaching lessons and skills;

   B. standard school policies and practices for accommodating both diverse and "at risk" populations (e.g., physically and/or mentally handicapped, disadvantaged, gifted, and multicultural groups);

C. standard school policies and practices in regard to legal issues and professional ethics;

D. professional, parental, and accreditation organizations that impact schools, e.g., PTA/O, NEA, AFT, NCATE (Peterson & Walberg, 1979;Davis & Thomas, 1989; Johansen, Collins, & Johnson,1990).

3. National Educational Studies and Commissions on Education: The results, conclusions, implications, and recommendations from national studies of and commissions on education, such as: A Nation at Risk (1983), the Holmes Group (1986), The Carnegie Report (1986), International Association for the Evaluation of Educational Achievement (IEA) Studies, Time for Results: The Governor's 1991 Report on Education (1986), High School and Beyond studies, Effective Schools studies, The Reading Report Card (1985), and The National Commission on Excellence in Teacher Education.

4. Professional Education Associations and Learned Societies: The national, state, and local chapters of professional educational organizations such as: American Educational Research Association (AERA), American Speech, Language and Hearing Association (ASHA), Council on Education of the Deaf, National Education Association (NEA), Association of Supervision and Curriculum Development (ASCD), National Council for Accreditation of Teacher Education (NCATE), American Association of College Teachers of Education (AACTE), National Council for Measurement in Education (NCME), National Association for the Education of Young

Children (NAEYC), and the International Reading Association (IRA).

References

Carnegie Forum on Education and the Economy (1986). A nation prepared: Teachers for the 21st century. Washington, D.C.: Carnegie Forum on Education and the Economy.

Davis, G. & Thomas, M. (1989). Effective schools and effective teaching. Boston: Allyn and Bacon.

Holmes Group (1986). Tomorrow's teachers: A report of the Holmes Group. Lancing, MI: The Holmes Group.

Johansen, J., Collins, H., & Johnson, J. (1990). American education: An introdution to teaching. (6th Ed.) Dubuque, IA: William C. Brown.

Kyle, R. (Ed.). (1985). Reaching for excellence: An effective school source book. (Document No. 065-000-0232). Washington, D.C.: U.S. Government Printing Office.

National Institute of Education (1985) The reading report card: progress towards excellence in our schools; Trends in reading over four national assessment, 1971-1984. (Report No. 15-R-01, Grant No. NIE G-83-001). Princeton, NJ: NAEP & ETS.

National Commission on Excellence in Education (1983). A nation at risk: The imperative for educational reform.

National Governor's Association Center for Polity Research and Analysis (1986). Time for results: The governor's 1991 report on education. Washington, D.C.: National Governor's Association.

Peterson & Walbergh (1979). Research on teaching: Concepts, findings, and implications. Berkeley, CA: McCutchar.

Definitions of the Knowledge Bases Included in the Evaluation Information component of the USAO Teacher Education Knowledge Base Model

INTERNAL EVALUATIONS

1. Student Evaluations:

Students evaluate courses of instruction within a program as well as the program itself. The course evaluation consists of a questionnaire completed by students at the end of each course of instruction for the purpose of rating the general instructional and organizational qualities of the instructor and conduct of the class. The program evaluation consists of a questionaire completed by students who have finished their student teaching experience. These senior students are asked to rate: (a) general education courses, (b) professional education courses, and (c) specialization courses. In addition, the students are asked to list program strengths, weaknesses, and suggestions for improvement.

2. Instructor Evaluations:

These consist of two kinds. The first is a self-evaluation form completed by instructors for the purpose of evaluating the courses they taught during the school year. This includes identifying any changes that were made as a result of the evaluation. These self-evaluations are included in the Annual Report. The second kind of instructor evaluation is an annual performance review by the

division chair to evaluate teaching and other professional activities of each instructor in their division. This review includes both a written report and a personal conference. These evaluations are forwarded to the Vice-President of Academic Affairs and each instructor receives a copy of his/her performance review.

EXTERNAL EVALUATIONS:

1. Entry-Year Experience:

   Observational reports compiled by public school consulting teachers, school principals, and USAO professors on the skills, abilities, and professional competence of USAO first-year teachers. Collectively, these data are used to determine whether the entry-year teacher should be recommended for a teaching certificate(s) or whether a second entry-year experience is necessary.

2. State Curriculum Exams:

   Descriptive statistics obtained from the Oklahoma State Department of Education on graduates of Oklahoma institutions of higher education in professional education programs who took the state curriculum exams in each curriculum specialty area (Arisian, 1987; OERI, 1987; Popham, 1987).

3. Graduate Follow-up Study:

An evaluation of USAO education graduates who have been teaching from one to two years. One part of the questionnaire is completed by the graduate's principal or supervisor, the other part by the USAO graduate.

4. Accreditation Organization Evaluations:

Audit reports from state, regional, and national professional accreditation organizations that require each specialty program to meet minimum criteria standards in order to maintain accreditation.

5. Public School Teacher's Evaluations:

An evaluation form consisting of a Likert Scale consisting of items rating student teachers on the dimensions of: (1) personal competency, (2) subject matter competency, (3) methodology and instrucitonal competency, and (4) classroom management competency. The cooperating teacher has the option of relating the information on this rating scale to the student teacher and then mailing it to the University Supervisor or mailing it directly to the University supervisor.

References

Arisian, P. (1988). Measurement driven instruction: A closer look. Educational Measurement, 7 (4), 6-11.

Popham, J. (1987). The merits of measurement driven instruction. Phi Delta Kappan, 68, 679-682.

Office of Educational Research and Improvement (1987). What's happening in teacher testing: An analysis of 7 state teacher testing practices. Washington, D.C.: OERI, Department of Education.

Tyler, R. (1949). Basic principles of cuirriculum and instruction. Chicago: University of Chicago Press.

Figure 1

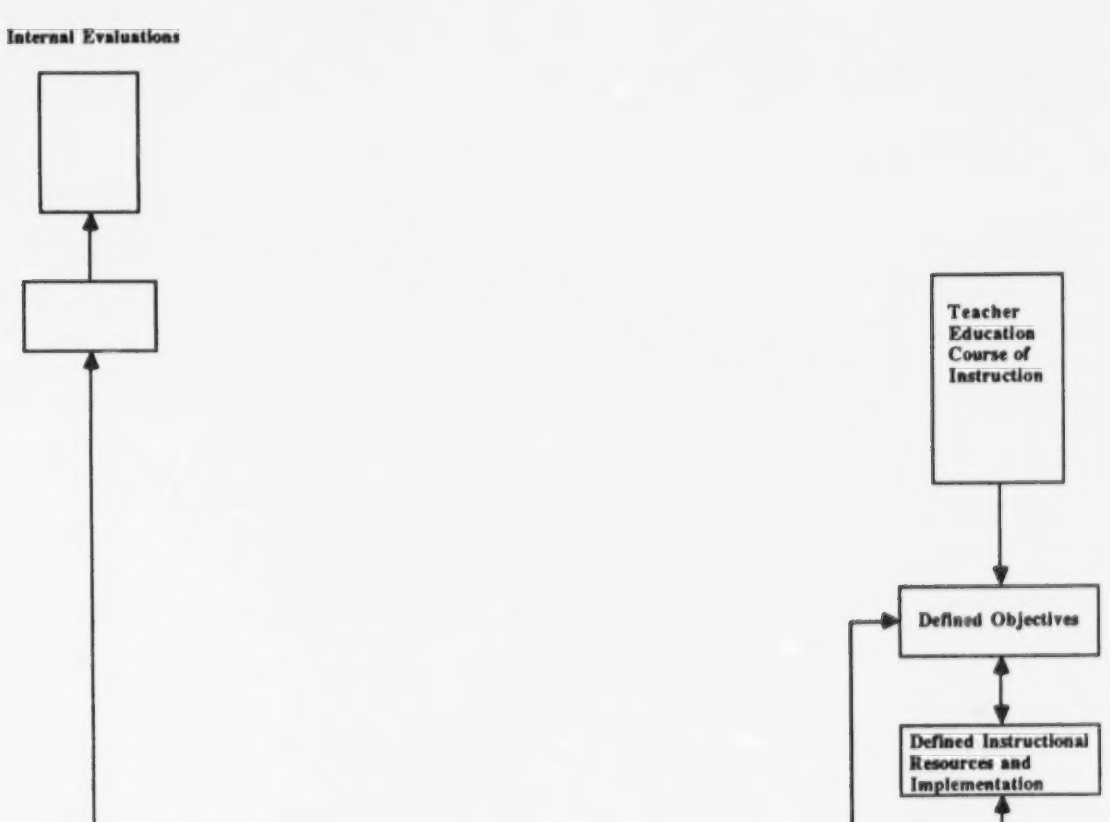

Figure 3. Course of Instruction Model for a Teacher Education Program's courses of instruction.

Figure 1.1

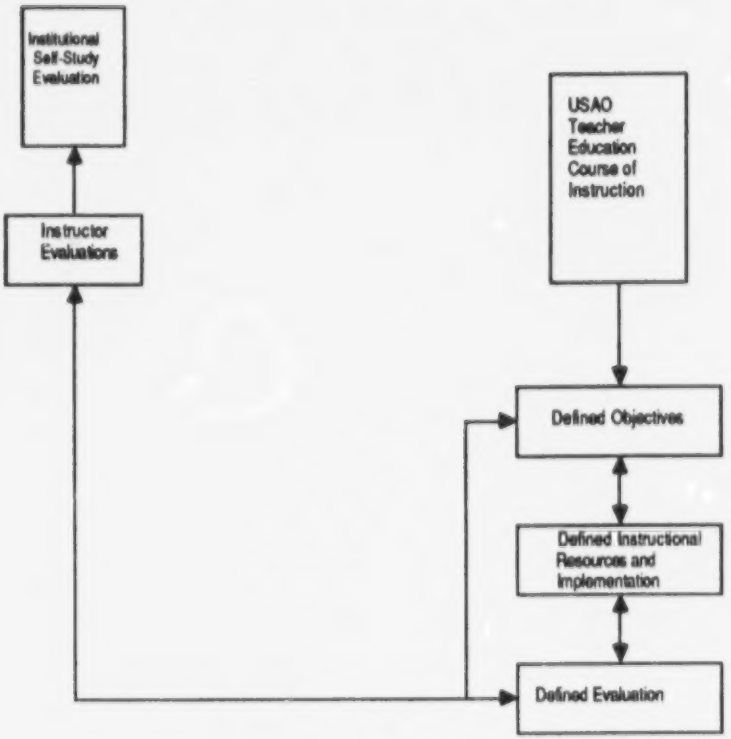

Figure 1.3. Delivery/Feedback Model for USAO's Teacher Education Program courses of instruction.

Definition of the Components of the Delivery/Feedback Model

1. Defined Objectives: Written instructional objectives.
2. Defined Resources and Implementation: Textbooks and materials required to implement the course of instruction as well as the enabling activities and instructional methods that utilize these resources during the course of instruction.
3. Defined Evaluation: Tests, projects, papers, and other course requirements that reflect the quality and extent of learning that took place; the criteria for determining whether the objectives for the course of instruction were met.

References

Tyler, R. (1949). Basic principles of curriculum and instruction. Chicago: University of Chicago Press.

Olila, P. (1989). Supervision in today's schools (3rd Ed.). White Plains, NY: Longman.

APPENDIX B

Figure 2 - The Component Program Model: the Curriculum Matrix

Figure 5 - the Program Objectives-Course of Instruction Matrix

Figure 6 - the Content-Behavior-Course of Instruction Matrix

Procedures Checklist for Adapting and Completing Figures 2, 5, and 6

Example of Definition of terms and a bibliography associated with an Elementary Education Program

Figure 2: Curriculum Matrix
Procedures Checklist

The following is a list of procedures to assist in completing Figure 2, the Curriculum Matrix.

_____1. To determine the model of your Component Program, identify 1 or 2 areas of research which are emphasized in the Program. Examining the following items in your Program will help you to do this: (1) the goals and objectives; (2) State licensing and certification exam objectives and minimum competency requirements for teachers; (3) text books, required readings, and syllabi for courses of instruction.

_____2. The areas of research that you have identified are the knowledge base model(s) for your program's current goals and objectives. Place the name(s) of this/these area(s) of research in the section of the Curriculum Matrix where "Knowledge Base Model(s) for the _____ Program Objectives:" has been typed.

_____3. Develop a brief (50 words or less) definition/ description of each model. Write the definition(s) on a separate sheet of paper and **cite complete references**. Doing this usually involves a review of the research; this review will also assist you with several other tasks and documents the knowledge base for your Program.

Checklist for Figure 2 Continued

_____4. Identify the major concepts associated the Knowledge base model(s) of your Program. Your review of the research as well as a review of the Table of Contents in course text books should help with this task. Condense these concepts into six or more Central Concepts of Instruction. These Central Concepts of Instruction represent the concepts which must be addressed through the course work in your Program in order to impart the knowledge base model concepts to the students.

_____5. List these central concepts of instruction in the cells down the left-hand side of the Curriculum Matrix.

_____6. Develop a brief (50 words or less) definition of each of these central concepts of instruction. Write these definitions on a separate sheet of paper and **cite complete references after each definition**. Once again, this task requires a little research and provides documentation.

_____7. Starting from the left, list the courses of instruction for your program, in taxonomical order by name and number, across the top of the Curriculum Matrix.

_____8. Place an "X" in the cells to indicate which courses of instruction are designed to impart each central concept of instruction.

_____9. Place the definitions and bibliography for the Knowledge Base Model and Central Concepts of Instruction for the Curriculum Matrix (i.e., Figure 2) in the Program file folder.

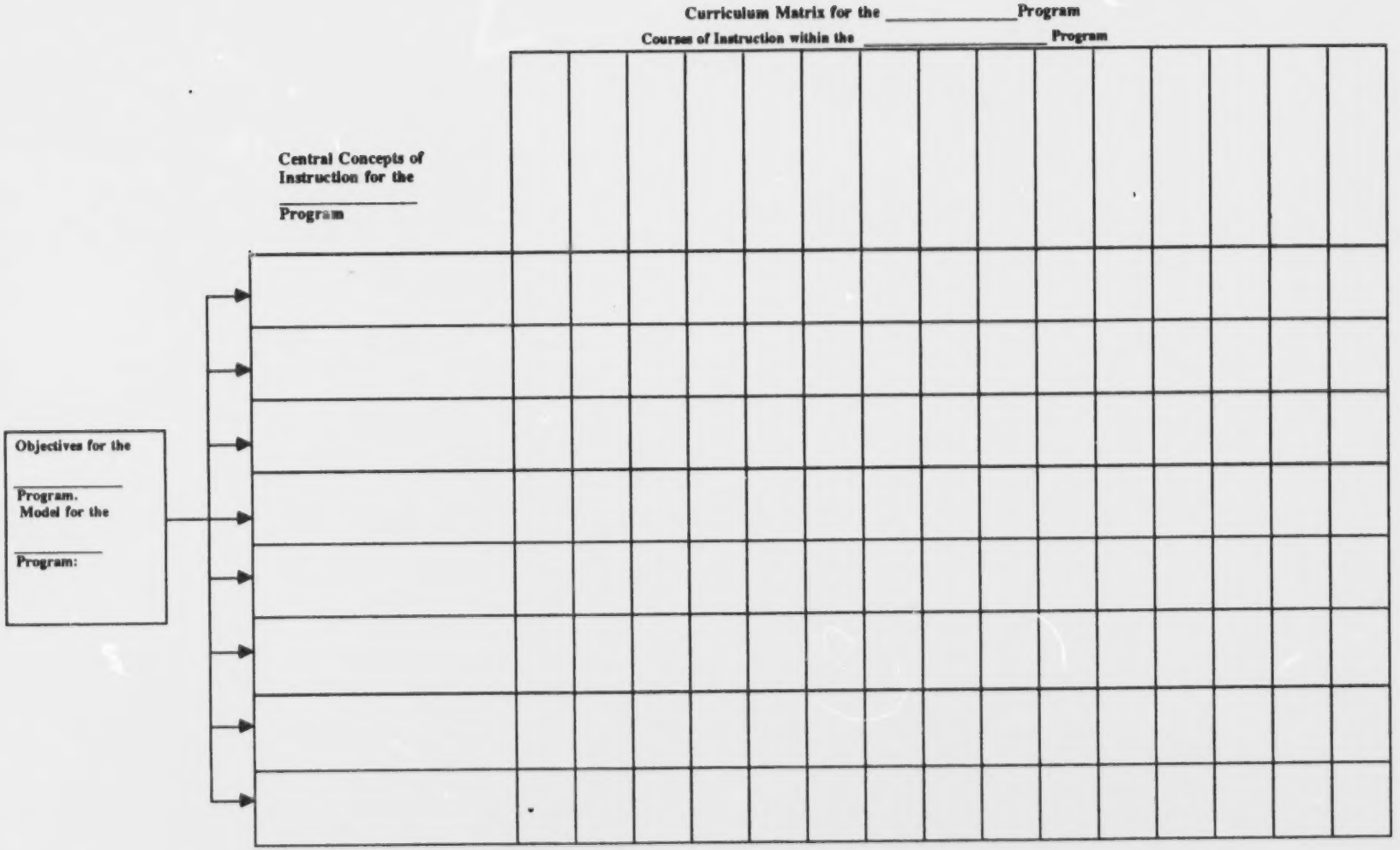
Curriculum Matrix for the _____Program
Courses of Instruction within the _____ Program
Central Concepts of Instruction for the _____ Program
Objectives for the _____ Program. Model for the _____ Program:

Figure 2. Component Program Model for the _____ Program.

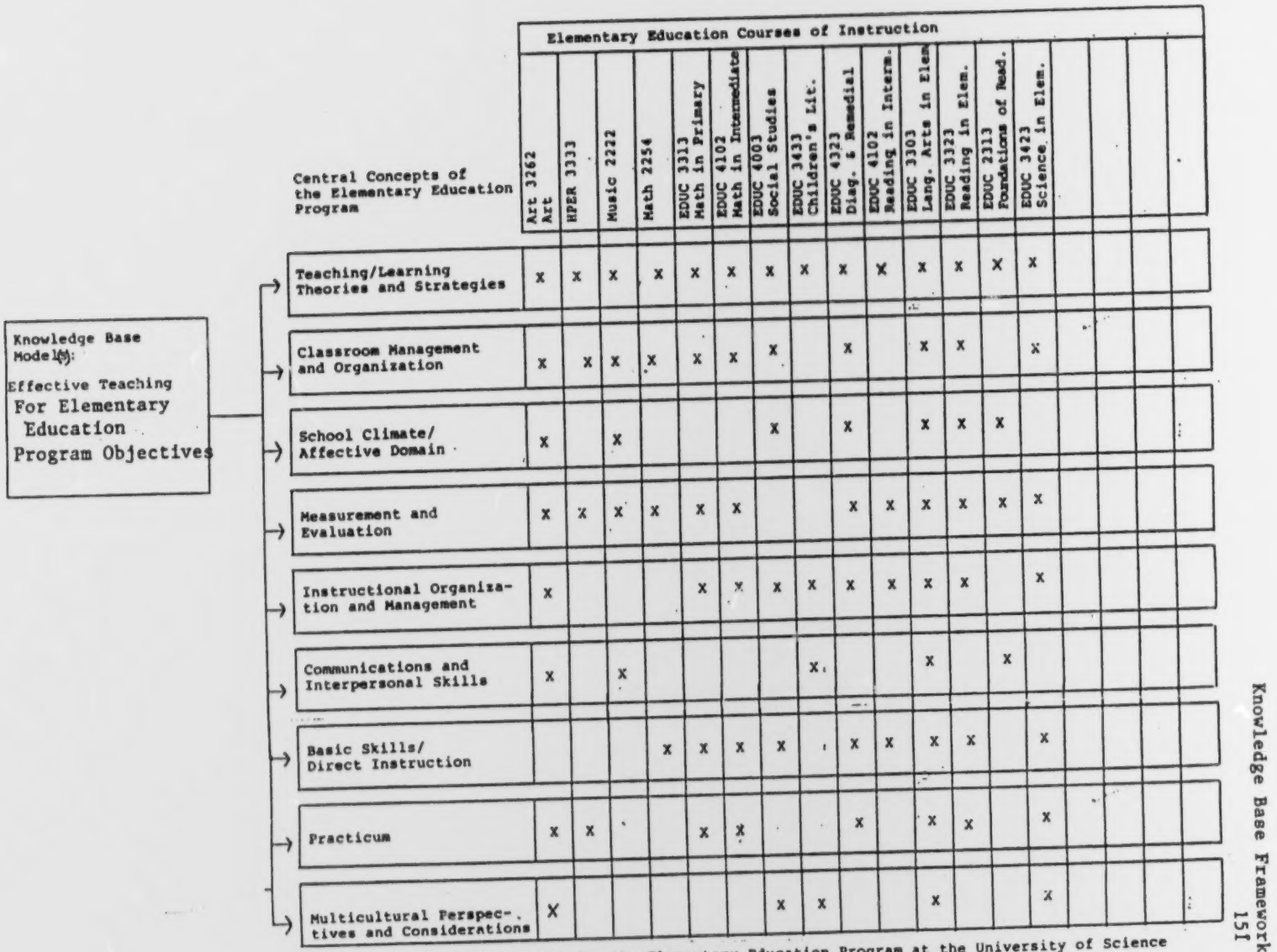
Knowledge Base Model(s):
Effective Teaching For Elementary Education Program Objectives
Central Concepts of the Elementary Education Program
Elementary Education Courses of Instruction
Art 3262 Art
HPER 3333
Music 2222
Math 2254
EDUC 3313 Math in Primary
EDUC 4102 Math in Intermediate
EDUC 4003 Social Studies
EDUC 3433 Children's Lit.
EDUC 4323 Diag. & Remedial
EDUC 4102 Reading in Interm.
EDUC 3303 Lang. Arts in Elem
EDUC 3323 Reading in Elem.
EDUC 2313 Foundations of Read.
EDUC 3423 Science in Elem.
Teaching/Learning Theories and Strategies
Classroom Management and Organization
School Climate/ Affective Domain
Measurement and Evaluation
Instructional Organization and Management
Communications and Interpersonal Skills
Basic Skills/ Direct Instruction
Practicum
Multicultural Perspectives and Considerations

Figure 2. Content model for the Elementary Education Program at the University of Science and Arts of Oklahoma.

Knowledge Base Model for an Elementary Education Program: Effective Teacher

The Effective Teacher model is derived from research that began during the 1970's and focuses on the identification and analyses of process that constitute effective schools. Influenced by process models similar to Carroll's (1963; 1977) and refined by Bloom (1976) and Cooley and Lohnes (1976), effective teaching research confirms for educators that: (1) students' schooling achievement is profoundly influenced by the kinds of learning experiences provided by parents and teachers, and (2) differences in student achievement correspond to differences in classroom management, processes, and instruction (Hunter, 1982; Kyle, 1985; Bennett, 1987; Davis and Thomas, 1989).

Characteristics of Effective Teachers

1. Clear goals and high expectations are maintained for all students.
2. Emphasis is on direct instruction in basic academic skills.
3. There is a strong sense of classroom order, routine, and discipline.

4. Most of class time is spent on instruction and the amount of time students spend engaged in academic tasks is high.

5. Teachers provide immediate feedback and positive reinforcement.

6. There is a systematic approach to instruction, assessment, & discipline.

7. Teachers are accepting of the concept of accountability.

9. Teachers tend to believe that all of their students can master the basic objectives.

References

Bennett, W. B. (Ed.).(1987). What works: Research about teaching and learning. Washington, D.C.: U.S. Government Printing Office.

Bloom, B. (1976). Human characteristics and school learning. New York: McGraw-Hill.

Carroll, J. (1963). A model of school learning. Teachers College Record, 64, 723-167.

Carroll, J. (1977). A revionist's model of school learning. Review of Education, 3, 155-167.

Cooley, W. & Lohnes, P. (1976). Evaluation research in education. New York: Wiley.

Davis, G. & Thomas, M. (1989). Effective schools and effective teachers. Boston: Allyn and Bacon.

Hunter, M. (1982). Mastery teaching. El Segundo, CA: TPI Publications.

Kyle, R. (Ed.).(1985). Reaching for excellence: An effective school source book (Document No. 065-000-0232-2). Washington, D.C.: U.S. Government Printing Office.

Peterson, P. & Walberg, H. (Eds.).(1979). Research on teaching: Concepts, findings, and implications. Berkeley, CA: McCutchan.

Whitrock, M. (Ed.). (1986). Handbook of research on teaching. New York: MacMillian.

Central Concepts of Instruction for a
Elementary Education Program
(Based on the Effective Teacher Model)

1. Teaching/Learning Theories and Strategies
2. Classroom Management and Organization
3. School Climate/Affective Domain
4. Measurement and Evaluation
5. Instructional Organization and Management
6. Communications/Interpersonal Skills
7. Basic Skills/Direct Instruction
8. Practium
9. Multicultural Perspectives/Considerations

Figure 5:
Content-Behavior-Course of Instruction Matrix
Procedures Checklist

The following is a list of procedures to assist in completing Figure 5, the Content-Behavior-Course of Instruction Matrix.

Using your Program's Curriculum Matrix:

_____1. List the central concepts of instruction down the top left-hand side of the matrix beside the box labeled "Program Content."

_____2. List the courses of instruction, in taxonomical order by name and number from left to right, across the top of the matrix under the section labeled "Courses of Instruction."

_____3. Place an "X" in the cells to indicate which courses of instruction are designed to address each concept. **These "X's" should be identical to the ones in the Curriculum Matrix.**

Using your Program's syllabi for courses of instruction:

_____4. List the types of "course requirements" for all of the courses of instruction in the program down the bottom left-hand side of the matrix beside the box labeled "Required Student Behaviors."

_____5. Place an "X" in the cells to indicate which type of required behaviors (course requirements) are designed to measure the objectives for each course of instruction.

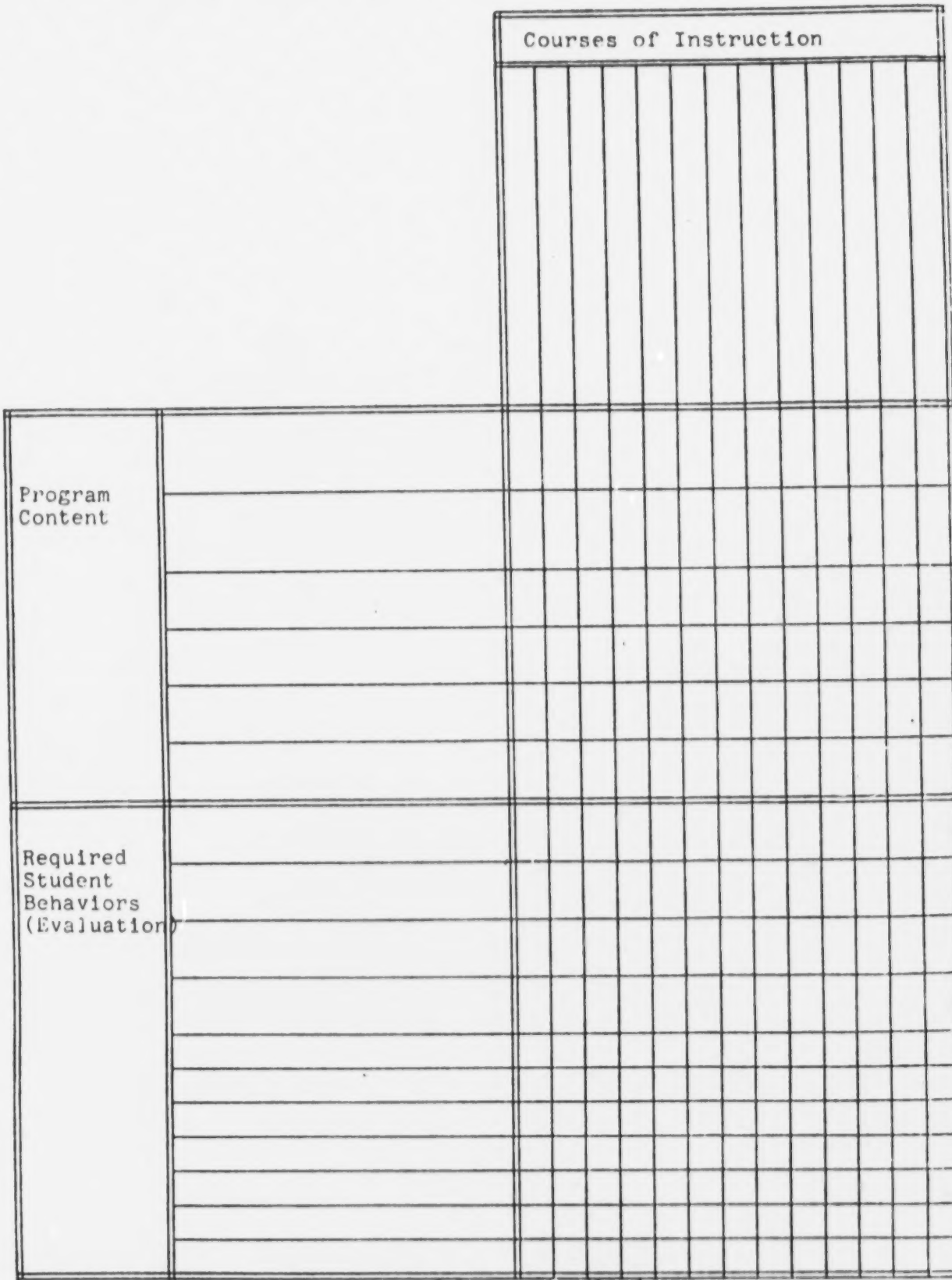

Figure 5. Content-Behavior-Course of Instruction Matrix.

		Courses of Instruction														
		Music for Elem. Teachers	Math for Elem. Teachers	P.E. in Elem. School	Diag. & Rem. Reading	Math for Interm. Grades	Social Stud. for Elem. Sch	Child Lit. for Elem.	Science for Elem. School	Read. in Inter. School	Rdg. in Elem. School	Math for Primary Grades	Language Arts	Foundations of Reading	Public School Art	
Program Content	Teaching/Learning Theories & Strategies	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Classroom Organization/ Management	X		X	X	X	X		X	X	X	X	X		X	
	School Climate/ Affective Domain			X	X	X	X	X	X	X	X		X	X	X	
	Measurement & Evaluation	X		X	X			X		X	X		X	X	X	
	Instructional Organization & Management	X		X	X	X	X	X	X	X	X	X	X		X	
	Communications & Interpersonal Skills	X		X				X				X	X	X	X	
	Basic Skills/Direct Instruction	X	X		X	X	X	X	X	X	X		X			
	Practicum				X			X							X	
	Multicultural Perspectives and Considerations			X	X		X	X		X			X	X	X	
Required Student Behaviors (Evaluation)	Written Examinations	X	X		X	X	X	X	X	X	X	X	X	X	X	
	Book/Resource Evaluation				X	X		X	X	X		X	X			
	Test Construction	X							X						X	
	Learning Laboratory					X			X			X				
	Learning Center Preparation					X						X				
	Lesson/Unit Plans	X			X	X	X		X	X	X		X		X	
	Field Experiences	X						X							X	
	Group/Individual Presentations	X				X	X	X	X	X	X	X	X	X	X	
	Peer Evaluation	X				X	X		X		X			X	X	
	Papers/Abstracts						X	X			X			X		
	Research Papers		X				X				X			X	X	
	Modified Case Study				X											
	Philosophy Paper														X	
	Card File				X											

Figure 5. Content-Behavior-Course of Instruction Matrix for the Elementary Education Program at USAO.

ELEMENTARY EDUCATION

Definition of The Central Concepts of Instruction

1. Teaching/Learning Theories and Strategies

   The application of educational psychology to classroom organizational and instructional practices such as learning theory and practice, planning and teaching strategies, and motivation (e.g., Woolfolk, 1990, Kyle, 1985).

2. Classroom Organization and Management

   The study of the dimensions of effective classroom organization and management. This includes: 1) planning for the year, term, month, and weekday; 2) requiring and maintaining safe and positive classroom behavior; 3) establishing class procedures; and 4) implementing the elements of systems management such as writing behavioral objectives, making professional judgments, managing movement, and implementing instructional strategies that enhance the attainment of objectives and student achievement (e.g., Fisher and Berliner, 1985; Gouland, 1985; Curwin and Mendler, 1988; Woolfolk, 1990).

3. School Climate/Affective Domain

   Behaviors that are characterized by feelings, emotions, and values as well as a safe, supportive atmosphere conducive to learning that embodies high expectations for both teachers and students. This includes teacher empathy and respect for students as well as attitudes and strategies that oppose the nonpromotion, labeling, and categorizing of students (e.g., Maynard and Howell, Kyle, 1985; Fox, et al., 1974; Kelley, 1980; Davis and Thomas, 1989; Shepard and Smith, 1989).

4. Measurement and Evaluation

Principles and techniques of measuring educational achievement. This includes obtaining the necessary skills to 1) interpret norm-referenced achievement, aptitude, and diagnostic tests, 2) construct teacher-made criterion-referenced tests, and 3) apply the standards for teacher competence in the educational assessment of students (e.g., Terwilliger, 1989; Stiggoms, et al., 1989; ETS, 1987).

5. Instructional Organization and Management

Managing and organizing instructional resources. This includes instructional decisions teachers must make in regard to 1) the subject matter to be covered, 2) the skills students must learn in order to achieve program objectives, and 3) the elements affecting the rate and degree of student learning such as, motivation, time-on-task, and grouping, as well as the pacing, and scope and sequence of instruction. Also included are the elements of lesson design generic to all subject areas, (e.g., Hunter, 1985), and the notion of systematic delivery of instruction, (e.g., Kyle, 1985; Fisher and Berliner, 1985)

6. Communications/Interpersonal Skills

Communication and interpersonal skills required by teachers to effectively carry out educational objectives and contribute to the congeniality of the overall operations of the school; this includes student, parent, staff, and school-community relations (e.g., Gouland, 1985; Berger, 1981; Kinder, 1982; Rotter and Robinson, 1986).

7. Basic Skills/Direct Instruction

Instruction in the basic skills of reading, writing and mathematics that places a premium on telling students explicitly what they are to learn and demonstrating to them clearly the cognitive operations they are to use in accomplishing academic tasks (e.g., Kyle, 1985; Rosenshine, 1979).

8. Practicum

Simulated and actual classroom experiences that provide meaningful and practical knowledge of and a forum for modeling real life classroom teaching, organization, and management skills.

9. Multicultural Perspectives and Considerations

Educational perspectives and considerations that value cultural diversity and stresses different cultures' distinctive identities within a larger society. This includes instilling self-esteem and pride in the aspirations of minority, cultural, and other "at risk" groups (e.g., Woolfolk, 1990; Tredt and Tredt, 1979).

Bibliography

Bennett, W. (Ed.). (1987). What works: Research about teaching and learning. Washington, D.C: U.S. Government Printing Office.

Berger, E. (1981). Parents as partners: The school and home working together. St. Louis, MO: The C.V. Mosby Company.

Bloom, B. (1976). Human chracteristics and school learning. New York: McGraw-Hill.

Bloom, B.S. (1968). Learning for mastery. Evaluation Comment, 1 (2). Los Angeles: Univ. of California, Center for the Study of Evaluation of Instructional Programs.

Carnegie Forum on Education and the Economy (May, 1986). A nation prepared: Teachers for the 21st century. Washington, D.C.: Carnegie Forum on Education and the Economy.

Carroll, J. (1963). A Model of school learning. Teachers College Record, 64, 723-733.

Curwin, R. & Mendler, A. (1988). Discipline with dignity. Alexandra, VA: Association for Supervision and Curriculum Development.

Davis, G. & Thomas, M. (1989). Effective schools and effective teachers. Boston: Allyn and Bacon.

Educational Testing Service (1987). Assessment in the service of learning. New Jersey: ETS.

Fisher, C. & Berliner, D. (1985) (Eds.). Perspectives on instructional time. New York: Logon.

Fox, R. et al., (1974). School climate improvement: A challenge to the school administrator. Bloomington, IN: Phi Delta Kappan.

Gagne, (1985). The conditions of learning. New York: Holt, Rinehart, and Winston.

Gronlund, N. (1985). Stating objectives for classroom instruction. New York: McMillian Publishing Co.

Hunter, M. (1982). Mastery teaching. El Segundo, CA: TPI Publications.

Johansen, J., Collins, H., and Johnson, J. (1990). American education: An introduction to teaching. Dubuque, IA: Wm. C. Brown Publishers.

Kelley, E. (1980). Improving school climate: Leadership techniques for educators. Reston, VA: National Association of Secondary School Principals.

Kinder, J. (1982). School public relations: Communicating to the community. Bloomingdale, IN: Phi Delta Kappan.

Kyle, R. (Ed.) (1985). Reaching for excellence: An effective school source book (Document No. 065-000-00230-2). Washington, D.C.: U.S. Government Printing Office.

Popham, J. (1987). The merits of measurement-driven instruction. Phi Delta Kappan, 68, 679-682.

Peterson, P. & Walberg, H. (Eds.) (1979). Research on teaching: Concepts, findings, and implications. Berkeley, CA: McCutchan.

Maynard, W. & Howell, B., School climate: A guide for practioners. Tulsa, OK: CADRE Publications Center, The University of Tulsa

National Assessment of Educational Progress (1985). The reading report card: Progress towards excellence in our schools. (Report No: 15-R-01) Prineton, N.J.

National Commission on Excellence in Education (April, 1983). A nation at risk: The imperative for educational reform. Washington, D.C.: U.S. Government Printing Office.

National Council for Accreditation of Teacher Education (1986). Standards, procedures, and policies for accreditation of professional teacher education units. Washington, D.C.: National Council for Accreditation of Teacher Education.

National Governors' Association Center for Policy Research and Analysis, (1986). Time for results: The governors' 1991 report on education. Washington, D.C.: National Council for the Accreditation.

Shepard, L. & Smith, L. (Eds.). (1989). Flunking grades: Research and policies on retention. New York: The Faline Press.

Rosenshine, B. (1979). The third cycle of research on teacher effects: Content covered, academic engaged time, and direct instruction. In P. Peterson & H. Walberg (Eds.), Research on teaching: Concepts, findings and implications.

Rotter, J. & Robinson, E. (1986). Parent-teacher conferencing: What research says to the teacher. Washington, D.C.: National Education Association.

Stiggins, R., Frisbie, D., Griswold, P. (1989). Inside high school grading practices: Building a research agenda. Educational Measurement: Issues and Practices, 8 (2), 5-14.

Terwilliger, J. (1989). Classroom standard setting and grading practices. Educational Measurement: Issues and Practices, 8 (2), 15-19.

Tyler, R. (1949). Basic principles of curriculum and instruction. Chicago: The Chicago University Press.

Whittrock, M. (Ed.) (1986). Handbook of research on teaching. New York: MacMillian.

Woolfolk, A. (1989). Educational psychology. Berkeley: McCrutcher, Englewood Cliffs, NJ: Prentice Hall.

Figure 6:
Program Objectives-Course of Instruction Matrix
Procedures Checklist

The following is a list of procedures to assist in completing Figure 6, the Program Objectives-Course of Instruction Matrix.

_____1. List the required courses of instruction for the Program, by name and number in taxonomical order from left to right, across the top of the matrix.

_____2. List the Program objectives in the cells down the left-hand side of the paper.

_____3. Place an "X" in the cells to indicate which courses of instruction are designed to measure each objective.

PROGRAM OBJECTIVES	COURSES OF INSTRUCTION														

Figure 6. Relationship of Courses of Instruction to the _____ Program Objectives.

ELEMENTARY EDUCATION PROGRAM OBJECTIVES	Foundations of Reading	Language Arts	Math--Primary	Reading--Elementary	Reading--Intermediate	Science for Elem. School	Children's Literature	Social Studies	Math--Intermediate	Diag./Rem. Reading	Public School Art	P.E. in Elementary	Math for Elementary	Music for Elementary	
To acquire a knowledge base in the content areas and models for effective teaching and instruction.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
To develop competency in the use of curriculum materials, instructional strategies, and classroom organizational and management procedures.	X	X		X	X	X	X	X		X	X	X		X	
To identify and evaluate recent trends, issues, resources, and practices in the field of elementary education.	X	X	X	X	X		X	X		X	X	X		X	
To design, implement, and evaluate creative, appropriate elementary instructional materials and activities.		X		X	X	X	X	X	X	X	X	X		X	
To experience practical teaching activities found in elementary schools.			X			X	X	X	X	X	X	X		X	
To demonstrate minimum competency in effective teaching strategies and interpersonal and communication skills.			X	X		X	X	X	X	X	X	X		X	
To develop strategies to work with children from different cultures and acquire multicultural classroom experiences.	X	X		X	X		X	X		X	X				

Figure 6. Relationship of Courses of Instruction to the Elementary Education Program Objectives.

APPENDIX C

Example of Figure 4 - Summary of the Knowledge Base Models, Purposes, and Measured Outcomes for Specialty Programs within a Teacher Education Program

Examples of Figures 7, 8, 9, and 10 and accompanying documentation

Program	Model(s) for Program Objectives	Purpose	Measured Outcome
Art	Effective Teaching	To qualify individuals to teach art in grades k-12 in an elementary or secondary school.	K-12 Certificate
Business Education	Effective Performance in Society	To qualify individuals to teach bookkeeping-clerical or business education in grades 7-12 in a secondary school.	7-12 Certificate
Early Childhood Education	Educating the Total Child; A Balanced Curriculum; Effective Teaching	To qualify individuals to teach in nursery through third grade programs.	PreKindergarten through 3rd Grade Certificate
Elementary Education	Effective Teaching	To qualify individuals to teach grades k-8 in the elementary school.	K-8 Certificate
English	Communications; Writing as a Process; Critical Thinking	To qualify individuals to teach language arts in grades 7-12 in a secondary school.	7-12 Certificate
Health and Physical Education	Effective Teaching; Scientific Approach to Movement	To qualify individuals to teach health education and physical education in grades K-12 in an elementary and/or secondary school.	K-12 Certificate

Figure .4 USAO Teacher Education specialty programs, model(s) for program objectives, and program purpose and outcome.

(figure continues)

Figure 1.4 continued

Program	Model(s) for Program Objectives	Purpose	Measured Outcome
Home Economics	Family and Individual in "Total" Context	To qualify individuals to teach vocational or general home economics in grades 7-12.	7-12 Certificate
Mathematics	Effective Teaching; Critical Thinking	To qualify individuals to teach grades 7-12 in a secondary school.	7-12 Certificate
Music: Instrumental	Practical Performance; Effective Teaching	To qualify individuals to teach instrumental music in grades k-12 in an elementary and/or secondary school.	K-12 Certificate
Music: Vocal	Practical Performance; Effective Teaching	To qualify individuals to teach Vocal music in grades k-12 in an elementary and/or secondary school.	K-12 Certificate
Science	Subject Matter Competency; Effective Teaching; Science and Society	To qualify individuals to teach biology, physics, chemistry, and general science in grades 7-12 in a secondary school	7-12 Certificate
Social Studies	Critical Thinking	To qualify individuals to teach social studies in grades 7-12 in a secondary school.	7-12 Certificate

(figure continues)

Figure 1.4 continued

Program	Model(s) for Program Objectives	Purpose	Measured Outcome
Speech & Drama	Effective Schools	To qualify individuals to teach Speech and Drama in grades 7-12 in a secondary school.	7-12 Certificate
Speech Pathology	Specialized ASHA Teacher Competency	To qualify individuals to work with K-12 students having communication disorders in an elementary and/or secondary school	Provisional Certificate
Special Education Programs			
Deaf Education	Specialized Teacher Competencies	To qualify individuals to work with deaf students in grades k-12 in an elementary and/or secondary school.	Regular & Conversion K-12 Certificate
Learning Disabilities	Teaching Competency; Reinforcement; Cognitative-Mediational	To qualify individuals to teach the learning disabled in grades K-12 in an elementary and/or secondary school	Regular & Conversion K-12 Certificate
Mental Retardation	Teaching Competency; Reinforcement; Cognitative-Mediational	To qualify individuals to teach mentally handicapped students in grades k-12 in an elementary and/or secondary school.	Regular & Conversion K-12 Certificate

CRITERIA FOR COMPLIANCE	COURSES OF INSTRUCTION												
	Educ 2002 Orientation	Educ 2011 Field Exp. I	Educ 2103 Human Development	Educ 3102 Educational Psychology	Educ 3203 School & Society	Educ 3211 Field Exp. II	Educ 3332 Media & Technology	Educ 3342 Computers in Education	Educ 4402 Classroom Management	Educ 4452 Evaluation in Education	SPED 2022 Exceptional Child	Educ 43-44 Student Teaching	Methods
Social, Historical, Philosophical Foundations of Education	X				X						X		
Theories of Human Development and Learning			X	X			X				X		
Research & Experience Based Principles of Effective Practice		X		X		X	X	X	X	X		X	X
Impact of Technology and Societal Changes on Schools	X				X		X	X			X		
Evaluation, Inquiry, and Research				X			X	X	X	X	X	X	X
Educational Policy	X	X		X	X				X	X	X		

Figure 7. Content included within USAO's professional studies courses of instruction that address NCATE criteria for compliance to standard nineteen.

An Example of the Documentation for Figure 7

Figure 7 represents the relationship between the courses of instruction in the Professional Studies component and the areas defined in the Criterion for Compliance to Standard 19. These areas are addressed in a minimum of _____ courses and most are addressed in _____(e.g., the majority) of the courses. Examples of this relationship may be found in course syllabi, textbooks, instructional technology equipment, library and computer resources, and examinations for courses of instruction (see File(s)_____).

CRITERIA FOR COMPLIANCE	COURSES OF INSTRUCTION													LEVELS OF INFUSION
	Educ 2002 Orientation	Educ 2011 Field Exp. I	Educ 2103 Human Development	Educ 3102 Educational Psychology	Educ 3203 School & Society	Educ 3211 Field Exp. II	Educ 3332 Media & Technology	Educ 3342 Computers in Education	Educ 4402 Classroom Management	Educ 4452 Evaluation in Education	SPED 2022 Exceptional Child	Educ 4305-4405 Student Teaching	Methods	
Independent Thinking					X		X		X					STRONG
	X		X	X		X		X		X	X	X		LIGHT
		X												NONE
Effective Communication	X		X		X		X	X	X	X	X	X		STRONG
		X		X		X								LIGHT
														NONE
The Making of Relevant Judgements				X	X	X	X	X	X	X	X	X		STRONG
	X	X	X											LIGHT
														NONE
Professional Collaboration	X	X		X	X	X			X	X	X	X		STRONG
			X				X	X						LIGHT
														NONE
Effective Participation in Educational System	X				X						X	X		STRONG
		X	X			X	X	X	X	X				LIGHT
				X										NONE
Discrimination of Values in Educational Arena	X	X	X		X	X			X		X			STRONG
				X			X	X		X		X		LIGHT
														NONE
Professional Ethics	X	X		X	X	X	X	X	X	X	X	X		STRONG
			X											LIGHT
														NONE

Figure 8. Content included within USAO's professional studies courses of instruction that address NCATE criteria for compliance to standard twenty.

An Example of the Documentation for Figure 8

Figure 8 illustrates the relationship between the courses of instruction in the Professional Education component and the areas defined in the Criterion for Compliance to Standard 20. To provide a more specific indicator to this compliance, the criteria were categorized by three levels of infusion, "Strong", "Light", and "None." These areas are addressed in a minimum of _____ courses and most are addressed in _____ (e.g. the majority) of courses. Documentation for this relationship may be found in: (a) course requirements and objectives outlined in the course syllabi, which focus on the concepts and skills listed in the Criterion for Compliance, (b) samples of student projects, assignments, research papers, and exhibits, and (c) examinations for courses of instruction (see File ___).

KNOWLEDGE AND SKILLS - PROFESSIONAL EDUCATION

CRITERIA FOR COMPLIANCE	COURSES OF INSTRUCTION												
	Educ 2002 Orientation	Educ 2011 Dir. Field Exp. I	Educ 2103 Human Development	Educ 3102 Educational Psychology	Educ 3203 School & Society	Educ 3211 Dir. Field Exp. II	Educ 3332 Media & Technology	Educ 3342 Computers in Education	Educ 4402 Classroom Management	Educ 4452 Evaluation in Education	SPED 2022 Exceptional Child	Educ 43-44 Student Teaching	Methods
Learning Theory			X	X			X				X	X	X
Educational Goals and Objectives	X	X		X	X		X			X	X	X	X
Cultural Influences on Learning	X		X	X	X				X	X	X	X	X
Curriculum Planning and Design		X		X	X	X	X				X	X	X
Instructional Techniques		X		X		X	X	X	X	X	X	X	X
Planning and Management of Instruction		X		X		X	X			X	X	X	X
Design and Use of Evaluation and Measurement Methods			X		X		X	X		X	X		X
Classroom and Behavior Management		X		X	X	X			X		X		
Instructional Strategies for Exceptionalities				X	X		X	X			X		X
Classrooms and Schools as Social Systems	X		X		X				X		X		
School Law	X				X						X		
Instructional Technology				X			X	X			X		X
Collaborative and Consultative Skills				X	X					X	X		X
Classroom and Time Management Skills				X		X	X		X		X		X
Effective Communication	X	X	X		X			X	X	X	X		X
Knowledge of Different Learning Styles			X	X	X		X	X			X		X
Knowledge of Teaching Strategies				X			X				X		X
Knowledge of Assessment Techniques			X	X	X		X	X		X	X		X

Figure 9. Content included within U.S.A.O.'s professional studies component that address NCATE criteria for compliance to standard twenty-one.

An Example of the Documentation for Figure 9

Figure 9 represents the relationship between the courses of instruction in the Professional Studies component and the areas of knowledge, skills, and concepts defined in the Criterion for Compliance to Standard 21. These areas are addressed in a minimum of _____ courses and most are addressed in _____ (e.g. the majority) of courses. Documentation for compliance to this standard include: (a) course syllabi, including bibliographies and outlines, (b) textbooks for courses of instruction, (c) instructional technology equipment, (d) library research and computer laboratory resources, (e) reports and summaries of students' field experiences, (f) examinations for courses of instruction, (g) teacher record books, and (h) student teacher evaluation forms.

Infusion Level of Multicultural and Global Perspectives	Professional Studies Courses of Instruction													
	Educ 2002 Orientation	Educ 2011 Field Exp. I	Educ 2103 Human Development	Educ 3102 Educational Psychology	Educ 3203 School & Society	Educ 3211 Field Exp. II	Educ 3332 Media & Technology	Educ 3342 Computers in Education	Educ 4402 Classroom Management	Educ 4452 Evaluation in Education	SPED 2022 Exceptional Child	Educ 4305-4405 Student Teaching	Methods
Strong					x					x		x	
Light	x	x	x	x		x							x
None							x	x					

Figure 10. Relationship between professional education courses of instruction and the infusion of multicultural and global perspectives.

An Example of the Documentation for Figure 10

Figure 10 represents the relationship between the courses of instruction in the Professional Studies component and the infusion of multicultural and global perspectives. These areas are addressed in a minimum of _____ courses and most are addressed in _____ (e.g. the majority) of courses. However, from the beginning orientation course through the student teaching experience, students in all classes are senthesized to be receptive to a multicultural and global viewpoint. Documentation for this may be found in course syllabi and other indicators of multicultural and global infusion may be found in File ___ .